

POSSIBLE MOTION

I MOVE to approve the award of Task Order 4 Construction Engineering in the amount of \$822,650.00 to Hatch Acres Corporation under the terms of the PSA dated April 2, 2009; authorize the Municipal Administrator to issue a PO for Task Order 4 Construction Engineering; obligate funds from Capital Project No. 90594; and execute this action on behalf of the Assembly of the City and Borough of Sitka.



Memorandum

December 21, 2011

To: General Assembly, City & Borough of Sitka
Via: Jim Dinley, Municipal Administrator
From: Christopher Brewton, Utility Director
Subject: **Blue Lake Hydroelectric Expansion Project – Professional Services Agreement (PSA) – Task Order 4: Construction Engineering- Hatch**

CONSTRUCTION ENGINEERING SERVICES FOR BLUE LAKE EXPANSION

It is our intent to issue a Request for Proposal for overall construction management of the Blue Lake Expansion project. However, it is in the CBS' best interest to retain Hatch Acres Corporation to provide specific engineering services during the project's construction phase (Task 4). There are critical components of the project design that have to be completed during the construction work, including rock support in the dam's left abutment and design of a scour protection wall in the plunge pool below the dam. The design of these components has been started by Hatch, but cannot be finalized until completion of additional geotechnical work which is part of the construction effort.

The geotechnical work, which consists of drilling a tunnel in the dam's left abutment, will be completed as Milestone 1 of Contract 9. Note that Contract 9 is the overall Expansion Project construction contract which will be bid in May 2012. As Hatch has started the design of the abutment rock support and the plunge pool scour wall, and because they are very familiar with the geotechnical conditions at Blue Lake through their two years of managing the geotechnical exploration programs, it is in the City's best interest to continue with Hatch for these two design tasks.

The City is in a similar situation with several equipment and material procurement contracts for the Blue Lake project. Hatch wrote the specifications for this equipment that is now under order for delivery to Sitka in 2013. Hatch is best suited to review the supplier's submittals and to help ensure the City gets what we paid for on these supply contracts. So, in addition to the geotechnical work near the dam the Electric Department recommends that Hatch be retained to provide review of procurement contract submittals, testing and commissioning of equipment, and completion of final as-built drawings. In November, we requested that Hatch provide a proposal for this work. They submitted a proposal in late November and we have negotiated a final scope and cost with Hatch over the past 3 weeks. The proposed scope, budget and schedule for the Hatch Task 4 services are attached to this memo.

The Assembly should note that the Hatch scope described in the attachment may change based on the selection of a construction management firm and the Resident Project Representative (RPR) that will oversee the construction phase of the project (some of the Hatch work may be taken over by the construction management firm and possibly, some additional scope may be assigned to Hatch). The cost of the Hatch Task 4 construction engineering is estimated to be \$822,650. Authorization of Task Order 4 Construction Engineering will bring the total cost under the Hatch PSA contract to \$9,280,201.00. This assumes the Assembly approval of Change Order 2 which we presented earlier.

The total Hatch engineering costs has exceeded the \$5,832,799 original estimate by \$3,447,402. As noted in the Electric Department's memo to the Assembly related to Hatch's Change Order 2—much of this \$3.4 million is extra work related to more difficult site conditions, FERC requests and more complex designs. It is expected that the additional money invested in engineering will result in reduced construction costs. Our most recent project cost estimate (\$97,064,660.00, as estimated on November 9, 2011), the project is now expected to cost slightly less than the Design Development Study estimated amount of \$100,360,000.

Dean Orbison, Project Engineer will be available to answer project questions.

Proposed Motion

I move to approve the award of Task Order 4 Construction Engineering in the amount of \$822,650.00 to Hatch Acres Corporation under the terms of the PSA dated April 2, 2009; authorize the Municipal Administrator to issue a PO for Task Order 4 Construction Engineering; obligate funds from Capital Project No. 90594; and execute this action on behalf of the Assembly of the City and Borough of Sitka.

December 19, 2011

Mr. Dean Orbison, P.E.
Generation Engineer
Electric Department
City and Borough of Sitka
105 Jarvis Street
Sitka, AK 99835

Dear Dean:

**Subject: Blue Lake Hydroelectric Expansion Project
Engineering Support During Construction**

We are pleased to submit this proposal for providing engineering support to the Blue Lake project during construction. We have called this Task 4 as the next sequential task in our services for this project.

We understand that Hatch's involvement during construction will largely be at the request of the Resident Project Representative (RPR). The scope descriptions in this proposal are based on our judgement and likely participation. Please note that we have not included any contingency in the hours, and the City or the RPR may change the scope at any time. We have divided Task 4 into six subtasks as follows:

1. **Support During Geotechnical Investigations**
 - a) Peter Friz at the site (six separate visits) and in office 780 hrs for Peter Friz
 - b) Final assessment of design by Jim Rutherford (including three site visits) with assistance from an intermediate engineer 300 hrs
 - c) Drawing revisions 140 hrs
2. **Review of Procurement Contract Submittals.** Switchgear= 100 hrs; transformers = 40 hrs, gates = 150 hrs; penstock and manifold = 100 hours; bridge crane = 100 hrs; steel building = 440; steel building shop QA = 50 hrs; T/G = 600 hrs. Total = 1,580 hrs
3. **Construction Liaison.** The RPR will decide whether any submittals for Contracts 8 or 9, or any requests for changes/substitutions, need Hatch involvement. We request an allowance of a fixed number of hours (say 12/week) for the duration of the construction period. - 12 hrs/wk x 100 wks = 1,200 hrs
4. **Commissioning Procedures for BOP Systems and an Overall Commissioning Checklist.** This does not include detailed commissioning procedures for the generating units which will come from the supplier. *This work will be primarily done by Don Martin (mechanical) and Jeff Coleman (electrical), with some supervision - 250 hrs.*
5. **Preparation of As-Built Drawings** based on markups received from site. 4 hrs avg per dwg = 1,280 hrs
6. **Preparation of Interconnection Drawings,** assuming five drawings, including switchgear, engineering and CAD. - 300 hrs.




Hours and costs are summarized in the following table:

| Item No. | Hours | Avg \$/hr | Cost | IT Cost \$/hr | Travel Costs | Total |
|-------------|-------|-----------|-----------|---------------|--------------|-----------|
| 1 | 1,220 | \$130 | \$158,600 | \$6,100 | \$18,000 | \$182,700 |
| 2 | 1,580 | \$130 | \$205,400 | \$7,900 | \$4,500 | \$217,800 |
| 3 | 1,200 | \$120 | \$144,000 | \$6,000 | | \$150,000 |
| 4 | 250 | \$150 | \$37,500 | \$1,250 | | \$38,750 |
| 5 | 1,280 | \$100 | \$128,000 | \$6,400 | | \$134,400 |
| 6 | 300 | \$140 | \$42,000 | \$1,500 | | \$43,500 |
| Subtotal | 5,830 | | \$715,500 | \$29,150 | \$22,500 | \$767,150 |
| Proj. Mgmt. | 300 | \$180 | \$54,000 | \$1,500 | | \$55,500 |
| TOTAL | 6,130 | | \$769,500 | \$30,650 | \$22,500 | \$822,650 |

Task 4 will be managed by Jim Rutherford, assisted by Amber French, as she is familiar with the work and communication systems required to process it. The dollars per hour average in the above billing table is also based on judgement, since the exact nature of many of the tasks is not known. However, we believe it should be representative of the actual costs. Our invoices will be based on time charged by individuals and their billing rates as approved by the City. If we approach the total amount of the purchase order and expect that it may be exceeded, we will immediately inform the City. On the other hand, if hours and expenses are less than the purchase order, the balance will not be invoiced. We trust this proposal is in accordance with your expectations.

Please call me if you have any questions.

Sincerely,



Harbinder S. Gill
Director, USA
Renewable Power

HSB:slb



Safety • Quality • Sustainability • Innovation